

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 1. (Currently amended) A graphics apparatus for rendering a scene including
2 an object having more than one representation, ~~each representation having a corresponding level~~
3 ~~of detail~~, the apparatus comprising:

4 a rendering system that computes a first point of intersection between an
5 ~~appropriate one of the representations~~ a first level of detail (LOD) of the object and a ray
6 corresponding to a view of the scene, and a second point of intersection between an ~~alternate one~~
7 ~~of the representations~~ a second LOD of the object and ~~a further projection of the ray.~~

1 2. (Original) A graphics apparatus according to claim 1, wherein the
2 rendering system further determines first and second colors respectively associated with the first
3 and second points of intersection.

1 3. (Original) A graphics apparatus according to claim 2, wherein the
2 rendering system further blends the first and second colors to provide a combined color for a
3 pixel corresponding to the ray.

1 4. (Currently amended) A graphics apparatus according to claim 3, wherein
2 the rendering system blends the first and second colors in accordance with first and second
3 weights respectively associated with the ~~appropriate and alternate representations~~ first LOD and
4 the second LOD.

1 5. (Original) A graphics apparatus according to claim 1, wherein the
2 rendering system selects the first LOD and the second LOD ~~appropriate and alternate~~
3 ~~representations~~ from among a plurality of LODs ~~the more than one representation.~~

1 6. (Original) A graphics apparatus according to claim 5, wherein the
2 rendering system selects the representations in accordance with a perceived size of the object in
3 the scene.

1 7. (Currently amended) A graphics apparatus, comprising:
2 a scene server for identifying an appropriate representation of an object among
3 more than one representation of the object, each representation having a corresponding level of
4 detail; and
5 a ray tracer coupled to the scene server that computes a first point of intersection
6 between ~~the appropriate representation~~ a first LOD of the object and a ray corresponding to a
7 view of a scene including the object, and a second point of intersection between ~~an alternate one~~
8 ~~of the more than one representations and a further projection of a~~ second LOD of the object and
9 the ray.

1 8. (Original) A graphics apparatus according to claim 7, further comprising
2 a shader that determines a respective color associated with the first and second points of
3 intersection.

1 9. (Original) A graphics apparatus according to claim 7, wherein weights are
2 respectively associated with the appropriate and alternate representations.

1 10. (Original) A graphics apparatus according to claim 9, wherein weights are
2 respectively associated with the appropriate and alternate representations, the shader further
3 determining a final color based on the respective colors and the respective weights.

1 11. (Original) A graphics apparatus according to claim 7, wherein the ray
2 tracer generates a ray tree based on the first point of intersection and a sibling ray tree based on
3 the second point of intersection.

1 12. (Original) A graphics apparatus according to claim 8, wherein the ray
2 tracer generates a ray tree based on the first point of intersection and a sibling ray tree based on
3 the second point of intersection.

1 13. (Original) A graphics apparatus according to claim 7, wherein the ray is a
2 camera ray.

1 14. (Original) A graphics apparatus according to claim 8, wherein the ray is a
2 camera ray.

1 15. (Original) A graphics apparatus according to claim 7, wherein the ray is a
2 shadow ray.

1 16. (Original) A graphics apparatus according to claim 8, wherein the ray is a
2 shadow ray.

1 17. (Original) A graphics apparatus according to claim 7, wherein the ray is
2 one of a refracted ray and a reflected ray.

1 18. (Original) A graphics apparatus according to claim 8, wherein the ray is
2 one of a refracted ray and a reflected ray.

1 19. (Currently amended) A graphics apparatus, comprising:
2 means for identifying an appropriate representation of an object among more than
3 one representation of the object, each representation having a corresponding level of detail; and
4 means for computing a first point of intersection between ~~the appropriate~~
5 ~~representation of a first LOD of the object~~ and a ray corresponding to a view of a scene including
6 the object, and a second point of intersection between ~~an alternate one of the more than one~~
7 ~~representations and a further projection of a second LOD of the object and the ray.~~

1 20. (Original) A graphics apparatus according to claim 19, further comprising
2 means for determining a respective color associated with the first and second points of
3 intersection.

1 21. (Original) A graphics apparatus according to claim 19, further comprising
2 means for respectively associating weights with the appropriate and alternate representations.

1 22. (Original) A graphics apparatus according to claim 20, further comprising
2 means for respectively associating weights with the appropriate and alternate representations, the
3 determining means including means for further determining a final color based on the respective
4 colors and the respective weights.

1 23. (Original) A graphics apparatus according to claim 19, further comprising
2 means for generating a ray tree based on the first point of intersection and a sibling ray tree based
3 on the second point of intersection.

1 24. (Original) A graphics apparatus according to claim 20, further comprising
2 means for generating a ray tree based on the first point of intersection and a sibling ray tree based
3 on the second point of intersection.

1 25. (Original) A graphics apparatus according to claim 19, wherein the ray is
2 a camera ray.

1 26. (Original) A graphics apparatus according to claim 20, wherein the ray is
2 a camera ray.

1 27. (Original) A graphics apparatus according to claim 19, wherein the ray is
2 a shadow ray.

1 28. (Original) A graphics apparatus according to claim 20, wherein the ray is
2 a shadow ray.

1 29. (Original) A graphics apparatus according to claim 19, wherein the ray is
2 one of a refracted ray and a reflected ray.

1 30. (Original) A graphics apparatus according to claim 20, wherein the ray is
2 one of a refracted ray and a reflected ray.

1 31. (Currently amended) A graphics method, comprising:
2 identifying an appropriate representation of an object among more than one
3 representation of the object, each representation having a corresponding level of detail (LOD);
4 and
5 computing a first point of intersection between a first LOD ~~the appropriate~~
6 ~~representation~~ of the object and a ray corresponding to a view of a scene including the object,
7 and a second point of intersection between ~~an alternate one of the more than one representations~~
8 second LOD of the object and ~~a further projection of the ray~~.

1 32. (Original) A graphics method according to claim 31, further comprising
2 determining a respective color associated with the first and second points of intersection.

1 33. (Original) A graphics method according to claim 31, further comprising
2 respectively associating weights with the appropriate and alternate representations.

1 34. (Original) A graphics method according to claim 32, further comprising
2 respectively associating weights with the appropriate and alternate representations, the
3 determining step including determining a final color based on the respective colors and the
4 respective weights.

1 35. (Original) A graphics method according to claim 31, further comprising
2 generating a ray tree based on the first point of intersection and a sibling ray tree based on the
3 second point of intersection.

1 36. (Original) A graphics method according to claim 32, further comprising
2 generating a ray tree based on the first point of intersection and a sibling ray tree based on the
3 second point of intersection.

1 37. (Original) A graphics method according to claim 31, wherein the ray is a
2 camera ray.

1 38. (Original) A graphics method according to claim 32, wherein the ray is a
2 camera ray.

1 39. (Original) A graphics method according to claim 31, wherein the ray is a
2 shadow ray.

1 40. (Original) A graphics method according to claim 32, wherein the ray is a
2 shadow ray.

1 41. (Original) A graphics method according to claim 31, wherein the ray is
2 one of a refracted ray and a reflected ray.

1 42. (Original) A graphics method according to claim 32, wherein the ray is
2 one of a refracted ray and a reflected ray.

1 43. (Original) A graphics method according to claim 31, wherein the
2 identifying step includes: determining a perceived size of the object;
3 comparing the perceived size with a value corresponding to the perceived size
4 respectively associated with each representation; and
5 identifying the appropriate and alternate representations in accordance with a
6 result of the comparing step.

1 44. (Original) A graphics method according to claim 43, further comprising
2 respectively associating weights with the appropriate and alternate representations in accordance
3 with the result of the comparing step.

- 1 45. (Original) A graphics method according to claim 44, further comprising
2 determining a respective color associated with the first and second points of intersection and the
3 respective weights.